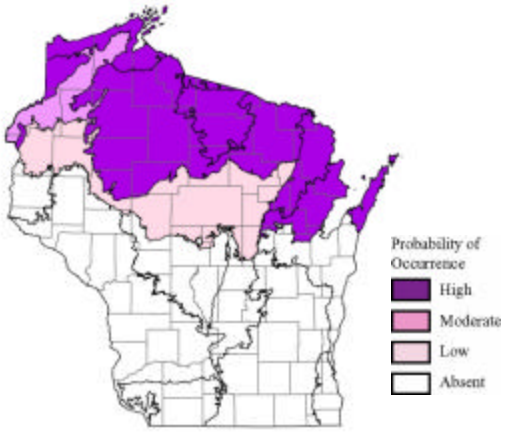
Mink Frog (*Rana septentrionalis*)

Species Assessment Scores*

State rarity:	2
State threats:	3
State population trend:	4
Global abundance:	3
Global distribution:	4
Global threats:	3
Global population trend:	4
Mean Risk Score:	3.3
Area of importance:	3

* Please see the Description of Vertebrate Species Summaries (Section 3.1.1) for definitions of criteria and scores.



Ecological Landscape Associations
Please note that this is not a range map. Shading does not imply that the species is present throughout the Landscape, but represents the probability that the species occurs somewhere in the Landscape.

Landscape-community Combinations of Highest Ecological Priority

Ecological Landscape	Community
North Central Forest	Coolwater streams
North Central Forest	Emergent marsh
North Central Forest	Impoundments/Reservoirs
North Central Forest	Inland lakes
North Central Forest	Northern sedge meadow
North Central Forest	Open bog
North Central Forest	Submergent marsh
North Central Forest	Warmwater rivers
North Central Forest	Warmwater streams
Northeast Sands	Coolwater streams
Northeast Sands	Warmwater rivers
Northern Highland	Coolwater streams
Northern Highland	Emergent marsh
Northern Highland	Inland lakes
Northern Highland	Northern sedge meadow
Northern Highland	Open bog
Northern Highland	Submergent marsh
Northern Highland	Warmwater rivers
Northern Highland	Warmwater streams
Northern Lake Michigan Coastal	Emergent marsh
Northern Lake Michigan Coastal	Northern sedge meadow
Northern Lake Michigan Coastal	Warmwater rivers
Northern Lake Michigan Coastal	Warmwater streams
Northwest Lowlands	Northern sedge meadow
Northwest Lowlands	Open bog
Northwest Lowlands	Warmwater rivers
Superior Coastal Plain	Coolwater streams
Superior Coastal Plain	Emergent marsh
Superior Coastal Plain	Open bog
Superior Coastal Plain	Submergent marsh
Superior Coastal Plain	Warmwater streams

Threats and Issues

- Net impacts of climate change are probably negative for this species, as competing species (green frogs, bullfrogs) are likely to advance further into mink frog range, and mink frog embryos have limited tolerance to warmer water temperatures and consequent lower oxygen diffusion rates.
- Shoreline development is reducing habitat for mink frogs, and likely creating increased competition with green frogs and bullfrogs along remaining undeveloped or undevelopable shorelines.
- Bullfrogs may be invasive competitors in many mink frog lakes.
- Invasive plants such as reed canary grass and giant reed grass can negatively impact shoreline habitat suitability.
- Invasive aquatic animals such as zebra mussels and bythotrephes change productivity pathways and food web dynamics of aquatic systems.
- Northern lakes are suffering from a variety of pollution problems including mercury, acid rain, salt, nutrient loads, and (where motorized traffic is heavy) fossil fuel spillage.
- Mink frog malformations have been documented in multiple years in a Bayfield County lake. More research is needed to determine whether malformations are impacting populations and what is causing malformations in this species
- Motorized watercraft are reducing water quality and increasing wave action impacts in shoreline habitats.

Priority Conservation Actions

- Restoration and permanent protection of shorelines and buffers is needed throughout the range, especially where significant shoreline development has compromised populations.
- More efforts are needed to control wetland and aquatic non-native invasive plants and animals to reduce negative impacts on this species and its habitat.
- More protective shoreland zoning ordinances are needed to protect enough significant natural shoreline and buffer to avoid compromising their associated wildlife and aquatic resource values.
- Major strides are needed in policy and education to more adequately represent and protect wildlife habitat in zoning and planning decisions.
- Continuing education is needed to provide riparian landowners with land management and use alternatives that are resource-friendly.
- Long term monitoring is needed to evaluate population status and track trends of representative populations.
- Research on the competitive interactions of mink frogs, green frogs, and bullfrogs is needed.
- Continue to work with river and lake associations and other conservation organizations to promote shoreline protection.